



Focus on Capture and Reuse of Irrigation Water

from Ecology's Water Resources Program

The Department of Ecology (Ecology) views the capture and reuse of irrigation water as a conservation measure that allows water users to achieve maximum beneficial use of their water.

Capture and reuse involves an irrigator capturing irrigation runoff at the lower end of their fields and reusing this water on the same fields for irrigation. It can improve a poor or inadequate water supply situation for water users. It can also reduce the amount of water that users must divert from a stream or withdraw from the ground over the course of a year. A reduction in the amount diverted or withdrawn can provide more water to satisfy other water rights and instream flow requirements in streams.

Capture and reuse may or may not require a new water right or changes to an existing one. These circumstances may vary and are discussed below.

Capture and reuse of irrigation water requires a water right

In order to capture and reuse irrigation water, you must first have one of the following:

- A state-issued water right permit or certificate.
- A valid water right claim on file with the Department of Ecology.
- A Federal Reserved Right (Winters Doctrine right).
- A contract for water purchased from an irrigation district (the district must have valid water rights).
- A water use which is exempt from the state permitting system. For irrigation purposes, this exemption is limited to the withdrawal of ground water for either:
 - The irrigation of no more than ½ acre of lawn or non-commercial garden.
 - Industrial purposes, including irrigation (limited to 5,000 gallons per day but no acre limit).

Guidelines for water rights

Water users may capture their irrigation water return flows at the lower end of their fields and reuse the water for irrigating the same fields. The capture and reuse systems must collect only irrigation return flows from the fields. The water user cannot capture natural shallow ground water, natural spring water, rainwater runoff, or other natural surface water.

Collection and use of waters other than the irrigation return flows would require a valid water right for that purpose. Water users must use their "capture and reuse water" only for the purpose(s) authorized by their water right(s) and only on the acreage where the water was originally applied.

Irrigation runoff water becomes public water once it flows outside the authorized place of water use. Collection and use of return flows that have again become public waters also requires a valid water right.



A water user may seek a change of his/her water right to add acres or authorize an additional place of use provided that the total consumptive use does not increase. Irrigation of unauthorized acreage or expansion of acreage is illegal. Illegal water users are subject to state regulatory action and penalties.

The capture and reuse of irrigation water supplied by a water purveyor, like an irrigation district or the United States Bureau of Reclamation, may be subject to restrictions imposed by the supplier. Water users contemplating the capture and reuse of irrigation water provided by a water supplier should first contact their supplier.

Examples of legal and illegal uses

The following are two examples of legal methods of capture and reuse of irrigation water:

Example 1:

A water user has a surface water right that authorizes 40 acres of irrigation with enough annual quantity to irrigate the acreage. The water user has used rill irrigation to irrigate 40 acres of mint. The water user constructs a water-collection system at the low end of the mint field to capture the water that would normally run off the property and re-circulates it to the upper end to increase the efficiency. The place of use, number of acres irrigated, and consumptive use have not changed. This method of capture and reuse is allowed and does not require a change of the existing water right.

Example 2:

A water user has a ground water right that authorizes 100 acres of irrigation with an adequate annual quantity. The water user has irrigated 100 acres of apples and cover crop between the trees. The water user buys 30 more acres next to the place of use. To irrigate the added acreage, the water user decides to make a crop change to apples with no cover crop on the entire 130 acres and construct a water collection system to capture irrigation water runoff. At the same time, the water user submits a water right change application to Ecology requesting to change the place of use in order to irrigate additional acres.

If Ecology determines that the annual consumptive quantity will not increase and other statutory tests associated with a change of a ground water right are met, the change can be authorized. The change in apples-with-cover to apples-without-cover will decrease the annual consumptive quantity on the original 100 acres, allowing the water authorized under the original water right to be spread over a larger area. The capture and reuse of irrigation water will increase the efficiency of the irrigation system but will not increase the consumptive use of water.

The following is an example of an illegal water use practice within an irrigation district:

A water user installs a capture and reuse collection system, then decides to sell some of his/her irrigation district water rights or water shares to reduce water costs (overhead). The water user believes that he/she can continue to irrigate the same number of acres by utilizing “capture and reuse water.” The problem is that the purchaser of the district rights or shares brings new acreage under irrigation while the original water user continues to irrigate all of the former irrigated lands; thus, the irrigation district’s service area is illegally expanded by a number of acres.

This example:

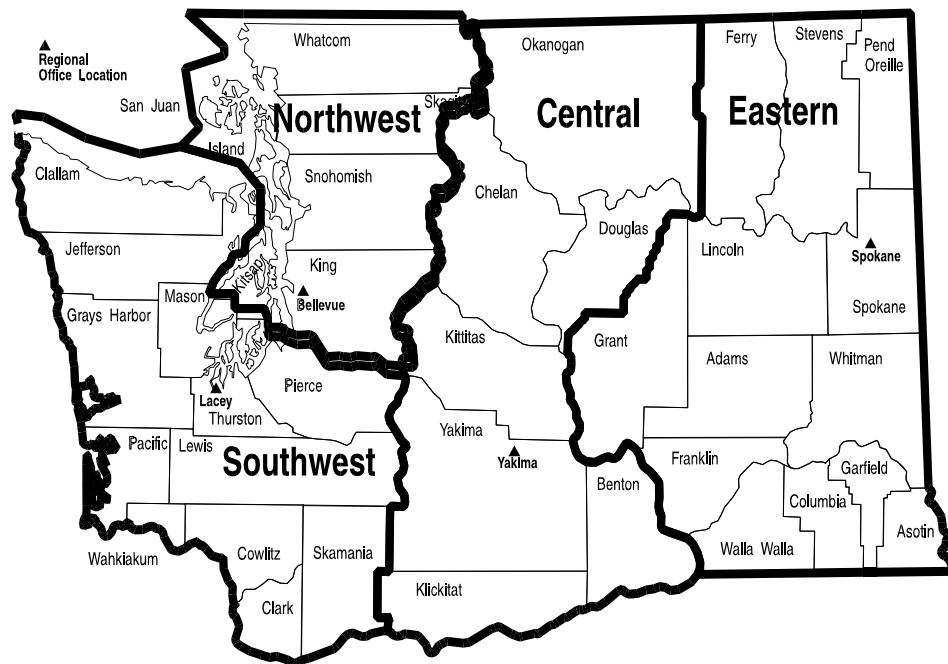
- Violates the acreage limitation of the irrigation district’s water right.
- May result in district water shortages.
- Violates the state water code requirement that all water right changes (like place of use) must receive Ecology approval.

- Illegally expands the consumptive use under the water right.
- Makes the district and the individual subject to possible regulatory action by the state.

Illegal expansion consumes public water that otherwise would be available to satisfy existing water rights, to maintain instream flows, or to recharge ground water. Illegal water use hurts water users and all beneficiaries of the public water resources of Washington State.

For more information

For more information on irrigation efficiency and capture and reuse systems please contact the United States Bureau of Reclamation (USBR), your water purveyor, and/or the Department of Ecology's regional office nearest you.



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